Panhandle Health District Aquifer Protection

Issue 2

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Dalton Gardens Pursues Sewer

Since 1977, Panhandle Health District has implemented an Aquifer protection rule that limits the use of on-site sewage disposal--septic tanks and drainfields--to one house per five acres. During those 33 years, most cities located over the Aquifer needed to develop on lots much smaller than five acres. To protect the Aquifer from wastewater but still allow cities to grow on small lots, PHD and the cities entered into Sewage Management Agreements (SMA). Most of the SMAs were crafted to allow new development ***temporarily*** to use septic tanks and drainfields on small lots while the cities either constructed or expanded municipal wastewater collection, treatment and disposal systems. The SMAs worked remarkably well. In the end, most cities provided municipal sewer service to all new development. The vast majority of existing homes and businesses that were using septic tanks and drainfields abandoned those systems to connect to the municipal sewer.

The first SMA signed in 1978 with the City of Dalton Gardens was unique. Most of the existing one-acre lots were created before the rule was in effect. The city indicated it did not desire to subdivide the one-acre lots. City officials also declared no interest in annexing more property. Under those conditions, PHD agreed to allow the existing lots to develop using septic tanks and drainfields without a requirement to build a municipal sewer system. This agreement has worked well for the residential areas of Dalton Gardens. It placed limitations on the commercial corridor, which has grown significantly since 1978. Under the agreement, commercial businesses are limited to 250 gallons of wastewater per acre per day and that wastewater must be of domestic characteristics.

For many years PHD and the city of Dalton Gardens have pursued options to provide municipal sewer service to the commercial sector. Two actions now make this possible: Government Way is being widened along the commercial corridor, and the city of Coeur d'Alene has agreed to allow businesses along Government Way to connect to its municipal sewer line. Dalton Gardens held public hearings regarding potential formation of a Local Improvement District to finance construction of a wastewater collection system. At the conclusion of the hearings, the City Council voted for an LID to finance a wastewater collection system for commercial properties from Dalton to Hanley avenues.

Rathdrum Prairie/ Spokane Valley Aquifer Facts

One of the fastest flows in the U.S.:

Up to 60' per day compared to average 1/4"— 5' per day

Volume:

10 trillion gallons

One of the most productive aquifers in the nation

Covers about 250 square miles in Idaho and 120 square miles in Washington

Panhandle Health District

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Hayden, ID 83835
Phone: (208) 415-5200
FAX: (208) 415-5201
www.phd1.idaho.gov

Public Health

Outreach

Aquifer Atlases

Provided to all businesses during Aquifer Protection team visits.

Delivered to all schools and libraries

Earth Day Celebration

Harding Center, Coeur d'Alene

Aquifer Fun Facts

Water conservation ideas

Protect the Aquifer buttons

Do I Live Over the Aquifer pin board

Students make edible aquifers

Aquifer Program presentation to 4th-grade class and Go Green Club

Pressing "Protect the Aquifer" buttons

North Idaho Fair

Aquifer staff and volunteers helped kids at the North Idaho Fair assemble "edible aquifers." They demonstrated the basic concepts of what an aquifer is and its vulnerability.

An edible aquifer starts with corn puffs (gravel) in a clear plastic cup. Milk (groundwater) is added, then chocolate ice cream (topsoil) and a straw (well). Green dye represents a contaminant.

The event was a hit, attracting more than 300 kids in five hours. Staff and volunteers also helped kids make "Protect the Aquifer" buttons with a button press and hosted a display in the Green Building.

Forest Owners Field Day

The Aquifer Team staffed an information table at the "Forest Owners Field Day" on June 12 near Athol, Idaho. The team focused on practices that maintain or improve the Rathdrum Prairie Aquifer. The field day featured short outdoor educational segments and exhibits for new and experienced owners of forested parcels covering an acre or more. The Cedar Mountain Farm just east of the Silverwood Theme Park near Athol was the site of the field day.

Forest Owners Field Day, June 12, 2010

The Aquifer Team was on site from 8 a.m. to 3:30 p.m. answering questions regarding approved containment for chemical storage, non-domestic wastewater management and approved disposal. It also passed out aquifer atlases and other useful health district information pamphlets.

Stormwater Technical Advisory Committee

The Stormwater Technical Advisory Committee (TAC) has met twice this year. The goal of the Stormwater TAC is to provide a forum for jurisdictions located over the aquifer and design professionals to discuss current and future stormwater practices.

Three needs were identified during the two meetings: 1) completing stormwater treatment recommendations for previously developed sites with limited available area; 2) developing a web page on the Idaho Department of Environmental Quality website that provides links to the various stormwater ordinances over the aquifer, and 3) identifying stormwater treatment options that will assist jurisdictions in meeting their federal stormwater permit requirements.

Problem: Non-domestic Wastewater

Routine inspections at businesses over the Rathdrum Prairie Aquifer uncover some interesting practices. Improper disposal of non-domestic wastewater (NDWW) is one of the most ubiquitous practices and indicates a lack of understanding of what can harm the aquifer.

NDWW is wastewater from sources other than sinks, showers, and toilets. Its disposal is not allowed on site over the Rathdrum Prairie Aquifer. Vehicle washing is the most common violation encountered and its wastewater may contain pollutants such as surfactants, solvents, and/or petroleum hydrocarbons. Such contaminants must discharge to a public sewer, be evaporated, contained in a closed loop system or held for hauling to a qualified receiver.

Other sources of NDWW that the Aquifer Protection Team finds in the field have included metal plating process fluids (heavy metals), rock polishing lubricant fluids (arsenic), concrete truck washout (concrete hardeners and other additives), and heavy equipment degreasing (petroleum hydrocarbons).

Cut-away showing sand and gravel layers overlaying aquifer

NDWW with oil and grease flowing across the ground at a heavy equipment cleaning operation.

"People don't seem to understand that they're contributing pollutants," says Aquifer Protection Program Coordinator Rick Barlow.

But the individual pollutants and particularly the sum of all NDWW contributions can hurt water quality. The potential for contamination over the Rathdrum Prairie is high because the sand and gravel that lie between people and the water supply doesn't provide much filtering for contaminants.

"What is hard to appreciate here is that at some locations on the Rathdrum Prairie our drinking water is only 120 feet below us," Rick says. "Most city home lots aren't that wide. Do you want to drink your truck wash water?"

FREE

RESIDENTIAL

HazMAT Disposal

Ramsey Transfer Station
3650 N. Ramsey Rd., CDA
Wednesdays & Saturdays
8 a.m. to 4 p.m.

Prairie Transfer Station
15580 W. Prairie Ave., PF
Fridays & Saturdays
8 a.m. to 4 p.m.

Please

- Do not leave materials outside gates
- Limit liquids to 5 gallons per household per collection day
- Try to deliver hazardous chemicals in original containers OR
- Mark containers to identify contents

Questions:
Panhandle Health District
415-5200
www.phd1.idaho.gov
Kootenai County Solid Waste Dept.
446-1430
www.kcgov.us/departments/solidwaste